

Branchiostegal rays six.

Mouth with its cleft scarcely oblique, quite deep, the supramaxillars extending behind the eyes, expanded towards their ends, especially at the upper angle. Teeth small, stout and rather blunt, in a band on each jaw, interrupted at the symphysis and narrowed on the sides behind. Vomer and front of palatines with similar teeth.

Dorsal fin rather low, and nearly even, with its origin behind the vertical of the pectorals, and almost connected to the base of the caudal behind.

Anal fin much shorter, but similar in form to the dorsal, and partly connected behind to the caudal.

Pectoral fins moderate, obliquely and convex nearer the lower rays, in an adipose skin.

Ventral filaments inserted under the preoperculum, compressed, closely annular, but not articulated like the rays of Phycis, &c.

The branchial arches have transverse scabrous ridges on each side of their concave surfaces, except the middle portion of the first below the bend, where the ridges of the outer side are replaced on the margin by about three produced, scabrous, subcylindrical processes. The cleft behind the fourth arch is moderate. There are no pseudo-branchiæ.

The stomach is large and sacciform, and, at the pyloric extremity, there are two short cæca, one on each side.

This genus is most nearly allied to *Dinematichthys* of Bleeker, but distinguished by the scaleless head, dentition and the absence of claspers to the anal papilla, &c.

BROSMOPHYCIS MARGINATUS Gill.

Synonymy.

- Brosmius marginatus* Ayres, Proc. California Academy of Natural Sciences, vol. i. p. 13, 1854.
Brosmius marginatus Girard, Explorations and Surveys for a Railroad Route, &c., vol. x. *Fishes*, p. 141.
Brosmophycis marginatus Gill, Proc. Academy of Natural Sciences of Phila.; vol. xiii. p. 168, 1861.
Halias marginatus Ayres, Proc. California Academy of Natural Sciences, part 2, p. 52, 1861.
Brosmophycis marginatus Gill, Proc. Academy of Natural Sciences of Phila., 1862, p. 280.
Dinematichthys marginatus Günther, Catalogue of the Fishes in the British Museum, vol. iv. p. 375.
Hab.—California.

Synopsis of the Family of LYCODOIDÆ.

BY THEODORE GILL.

In the present article, it is desired to draw the attention of American marine zoologists to the species of this family, to call forth the search for any species of two of the genera hitherto only known from Greenland, or high northern seas; and also to embody the views regarding the affinities of the several genera, which have been widely scattered in the different ichthyological systems, and yet which appear to be connected by the closest ties.

Only the different species of *Enchelyopus* and *Gymnelis* are known to the author; acquaintance with *Lycodes* being confined to the descriptions and excellent figures of Reinhardt, Kroyer and Richardson.

Family LYCODOIDÆ (Günther).

Synonymy.

Zoarchidæ Swainson, Natural History and Classification of Fishes, Amphibians and Reptiles, vol. ii. pp. 184, 283, 1839.

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